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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/720,829	11/24/2003	Kevin D. Horner-Richardson	9858-000100/COB	3962
27572 7590 07/27/2007 HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303			EXAMINER PASCHALL, MARK H	
			ART UNIT 3742	PAPER NUMBER
			MAIL DATE 07/27/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/720,829

Applicant(s)

HORNER-RICHARDSON ET AL.

Examiner

Mark H. Paschall

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 6-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

***Continued Prosecution Application***

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-4,6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Enyedy 5,938,949 in view of Hill 3,061,709. Enyedy et al teach the claimed subject matter except for showing a gas controller located within the handle of the torch. The patent to Hill is applied for teaching use of by-pass member 15, which slides and engages and disengages gas valve 28,38 to control the local gas pressure in the torch

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head. Note that gas shielded arc torches do use non-consumable electrodes and do create a plasma discharge, as claimed. In view of Hill teaching that local control of the gas flow via a valve in the torch handle/head as conventional, one of ordinary skill in arc torches would have been motivated to adapt the torch handle head of Enyedy et al with a local gas control device, to effect a local control of the gas flow proximate the torch head. As per claim 8 note that reduction of start time would inherently occur in the Hill system and the Enyedy et al system as modified. Claims 6-8 set forth the steps of creating gas pressure in the torch head for plasma arc generation. It is clear that the pressure in Enyedy et al as modified, does build up pressure in the torch head in response to activation of the gas solenoid, as set forth in the claimed subject matter. The claims rejected are silent as to the relative positions of the torch head and the gas activation device.

### ***Response to Arguments***

Applicant's arguments filed 05-07-2007 have been fully considered but they are not persuasive. The patent to Enyedy et al teaches a plasma arc torch with a solenoid valve which supplies gas to a plasma arc chamber, as claimed. See column 16, paragraph 2. with respect to claim 1, Enyedy et al do not teach the solenoid located within the torch handle. The patent to Hill was applied for teaching use of a gas valve in the handle of an arc torch, as claimed. Though not a plasma torch the arc torch conventionally uses electrodes which do create a plasma upon activation of the arc in gas and are considered analogous to plasma arc torches. Hill is relied on for evidencing

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that a gas control valve can be located in the handle of an arc torch and use of the same would inherently and logically reduce the gas delay upon use of the torch. The artisan would have found proper motivation in the hill patent to reduce the gas start delay in the Enyedy et al system by locating the solenoid or gas valve in Enyedy et al in the torch handle, versus lack of disclosure in Enyedy et al just where the solenoid is located. Claim 5 has been specified as containing allowable subject matter for specifying that the gas control valve is in the torch head, located distally from the torch handle. Claims 6-8 have been amended to set forth that gas pressure is built up within a part of the torch head distally located from the torch handle. This does not mean that the gas control valve is located in the torch head, though. In fact no location of the gas control valve is specified and Enyedy et al as modified by Hill does teach a gas control valve located in the torch handle, and triggering of this valve is construed as building up pressure in the torch head, which can be disposed distally from the torch handle. Note that triggering of the gas control valve in Enyedy et al as modified inherently builds up gas in all parts of the torch, downstream from the valve.

***Allowable Subject Matter***

Claim 5 is allowed.

The following is a statement of reasons for the indication of allowable subject matter: claims 5 is allowable for teaching use of a solenoid distally located from the torch handle, a feature not set forth in the prior art of record.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

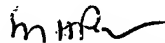
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark H. Paschall whose telephone number is 571 272-4784. The examiner can normally be reached on 7am - 3pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on 571-272-4777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Mark H Paschall  
Primary Examiner  
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Mp